

(FW)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant: Daniel K. Sodickson
 Serial No: 10/771,041
 Confirmation No.: 1542
 Filed: February 3, 2004
 For: PARALLEL MAGNETIC RESONANCE IMAGING
 TECHNIQUES USING RADIOFREQUENCY COIL ARRAYS
 Examiner: Not Yet Assigned
 Art Unit: 2859

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 28th day of June, 2004.

[Signature]
Steven J. Henry, Reg. No. : 27,900

Commissioner For Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following documents:

- Information Disclosure Statement
- PTO Form 1449 with one reference
- Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 720-3500, Boston, Massachusetts.

A check is not enclosed. If a fee is required, the Commissioner is hereby authorized to charge Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,
Daniel K. Sodickson, Applicant

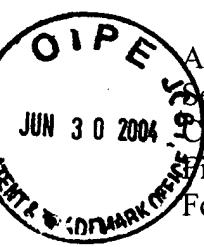
By: *[Signature]*
 Steven J. Henry, Reg. No.: 27,900
 Wolf, Greenfield & Sacks, P.C.
 600 Atlantic Avenue
 Boston, Massachusetts 02210-2211
 (617)720-3500

Docket No. B0662.70055US00

Date: June 28, 2004

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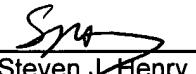
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 Steven J. Henry
 Reg. No. 27,900

Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

STATEMENT FILED PURSUANT TO THE DUTY OF
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement has been filed before the mailing date of a first Office Action on the merits in the above-identified case. No fee or certification is required.

PART II: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

PART III: Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,
Daniel K. Sodickson, *Applicant*

By: SJH
Steven J. Henry, Reg. No. 27,900
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
(617) 720-3500

Docket No. B0662.70055 US00

Date: June 28, 2004

XNDDX

FORM PTO-1449/A and B (Modified)			APPLICATION NO.: 10/771,041	ATTY. DOCKET NO.: B0662.70055US00
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>JUN 30 2004</i>			FILING DATE: February 3, 2004	CONFIRMATION NO.: 1542
			APPLICANT: Daniel K. Sodickson	
SEARCHED	1	of 2	GROUP ART UNIT: 2859	EXAMINER: Not Yet Assigned

U.S. PATENT DOCUMENTS

Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
	*A1	5,910,728		Sodickson	06-08-1999
	*A2	5,469,060		Meyerand	11-1995
	*A3	5,374,890		Zou, et al.	12-1994
	*A4	5,208,534		Okamoto, et al.	05-1993
	*A5	4,857,846		Carlson	08-1989
	*A6	4,825,162		Roemer, et al.	04-1989
	*A7	2003/0030437		Bydder et al.	02-2003
	*A8	2002/0158632	A1	Sodickson MD Ph.D., Daniel K.	10-2002
	*A9	6,476,606	B2	Lee, Ray F.	11-2002
	*A10	6,289,232	B1	Jacob, et al.	09-2001
	*A11	2001/0043068	A1		11-22-2001
	A12	6,717,406		Sodickson	04-06-2004

FOREIGN PATENT DOCUMENTS

Examiner's Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/Country	Number	Kind Code			
	*B1	WO	99/54746		Konin-Klijke Philips Electronics	10-28-1999	
	*B2	WO	00/72034	A1	Konin-Klijke Philips Electronics NV	11-30-2000	
	*B3	WO	00/72036	A1	Konin-Klijke Philips Electronics NV	11-30-2000	

OTHER ART – NON PATENT LITERATURE DOCUMENTS

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
	*C1	"Signal-to-Noise Ratio and Signal-to-Noise Efficiency in SMASH Imaging", Daniel K. Sodickson, et al., Magnetic Resonance In Medicine 41:1009-1022 (1999).	
	*C2	"Smash Imaging", Daniel K. Sodickson, et al., New Techniques in Body MR Imaging, 1064-9689/99, Volume 7, Number 2, May 1999, pp. 237-254.	
	*C3	International Search Report from PCT application number PCT/US01/07728.	
	*C4	Sodickson D.K., et al., "Simultaneous Acquisitions of Spatial Harmonics (SMASH) Fast Imaging With Radiofrequency Coil Arrays" Magnetic Resonance in Medicine, Academic Press, Duluth, MN, US, vol. 38, no 4, October 1, 1997, pages 591-603	
	*C5	Sodickson D.K. et al., "Accelerated Coronary MRA in Volunteers and Patients Using Double-Oblique 3D Acquisitions With SMASH Reconstruction" Proceedings of the International Society For Magnetic Resonance in Medicine, Seventh Scientific Meeting and Exhibition, vol. 2, May 22, 1999, page 1249.	
	*C6	Sodickson D.K. "Tailored SMASH image reconstruction for robust in vivo parallel MR imaging", Magnetic Resonance in Medicine, Aug. 2000, Wiley, USA, vol. 44, no. 2, pages 243-251.	

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Sheet	2	of	2	GROUP ART UNIT: 2859	EXAMINER: Not Yet Assigned

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		Office/ Country	Number	Kind Code			

OTHER ART – NON PATENT LITERATURE DOCUMENTS

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
	*C7	Kyriakos W.E., et al. "Sensitivity Profiles From An Array of Coils for Encoding and Reconstruction in Parallel (Space RIP)" Magnetic Resonance in Medicine, Academic Press, Duluth, MN, US, vol. 44, no. 2, August 2000, pages 301-308.	
	*C8	Sodickson D.K., "A Generalized Basis Approach to Spatial Encoding with Coils Arrays: SMASH-SENSE Hybrids and Improved Parallel MRI at High Accelerations" Proceedings of the International Society for Magnetic Resonance in Medicine, Eighth Scientific Meeting and Exhibition, vol. 1, April 1, 2000, page 272.	
	*C9	RA J.B. et al., "Fast Imaging Using Subencoding Data Sets from Multiple Detectors", Magnetic Resonance in Medicient, Academic Press, Duluth, MN, US, vol. 30, no. 1, July 1, 1993, pages 142-145	
	*C10	Magnetic Resonance in Medicine 42 952-962 (1999), Klaas P. Pruessmann et al "SENSE Sensitivity Encoding For Fast MRI"	

EXAMINER

DATE CONSIDERED

#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. 09/524,217 , filed 4/6/04, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

[NOTE - Must provide a copy of any patent, publication, other information listed, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]